What is claimed is:

1. A coated transfer sheet comprising:

a substrate having a first and second surface;

at least one barrier layer comprising a polymer selected from the group consisting of a thermosetting polymer, an ultraviolet curable polymer, and combinations thereof; and

at least one release layer comprising a film forming binder overlaying said at least one barrier layer.

2. The coated transfer sheet of claim 1, wherein said release layer comprises a film-forming binder, an elastomeric emulsion, a water repellant and a plasticizer.

3. The coated transfer sheet of claim 2, wherein said wherein said film-forming binder is an acrylic dispersion, said water repellant is polyurethane dispersion and said plasticizer is a polyethylene glycol.

4. The coated transfer sheet of claim 3, wherein said acrylic dispersion is an ethylene acrylic acid dispersion.

5. The coated transfer sheet of claim 3, wherein

said film-forming binder melts in the range of from about 65°C to about 180°C;

said elastomeric emulsion has a Tg in the range of from -50°C to 25°C;

and said polyurethane dispersion has a Tg in the range of from -50°C to 25°C.

6. The coated transfer sheet of claim 1, which further comprises polyethylene glycol.

7. The coated transfer sheet of claim 5, wherein said film-forming binder is present in an amount of from about 46 to about 90 percent by weight;

said elastomeric emulsion is present in an amount of from 1 to about 45 percent by weight;

said polyurethane dispersion is present in an amount of from 1 to about 8 percent;

and said release layer further comprises polyethylene glycol present in an amount of from 1 to about 8 percent by weight.

8. The coated transfer sheet of claim 1, which further comprises at least one image receiving layer overlaying said at least one release layer, said image receiving layer comprising an ethylene acrylic acid co-polymer dispersion.

9. The coated transfer sheet of claim 7, wherein said film-forming binder is present in an amount of at least about 86 percent by weight;

said elastomeric emulsion is present in an amount of at least about 5 percent by weight;

said polyurethane dispersion is present in an amount of at least about 5 percent;

and said polyethylene glycol is present in an amount of at least about 4 percent by weight.

10. The coated transfer sheet of claim 6, wherein said polyethylene glycol comprises a polyethylene glycol mono ((tetramethyl butyl) phenol) ester compound.

11. The coated transfer sheet of claim 2, wherein said elastomeric emulsion is selected from the group consisting of polybutadiene, polybutadiene derivatives, polyurethane, polyurethane derivatives, styrene-butadiene, styrene-butadiene-styrene, acrylonitrile-butadiene, acrylonitrile-butadiene-styrene, acrylonitrile-ethylene-styrene, polyacrylates, polychloroprene, ethylene-vinyl acetate and poly (vinyl chloride).

12. The coated transfer sheet of claim 1, wherein said thermosetting polymer is selected from the group consisting of thermosetting acrylic polymers and blends; thermosetting polyurethanes, block polyurethanes and aromatic-functional urethanes; thermosetting polyester polymers and co-polymer systems; aromatic-functional vinyl polymers and polymer blends; and thermosetting epoxy resins.

13. The coated transfer sheet of claim 12, wherein said thermosetting acrylic polymers and blends are hydroxyl-functional acrylic polymers, carboxy-functional acrylic polymers and vinyl acrylic polymer blends.

14. The coated transfer sheet of claim 12, wherein said thermosetting polyester polymers and co-polymer systems are neopentyl glycol isophthalic polyester resins, dibromoneopentyl glycol polyester resins and vinyl ester resins.

15. The coated transfer sheet of claim 12, wherein said thermosetting epoxy resins are epoxy novolac resins.

16. The coated transfer sheet of claim 1, wherein said ultraviolet curable polymers are selected from the group consisting of cationic mechanism setting UV curable polymers, free radical mechanism setting UV curable polymers and a hybrid resin system comprising both cationic mechanism and free radical mechanism setting UV curable polymers.

17. The coated transfer sheet of claim 1, wherein said thermosetting or ultraviolet curable polymer is combined with at least one vinyl acetate polymer.

18. The coated transfer sheet of claim 1, wherein said ultraviolet curable polymer comprises monomer and oligomer primary resins.

19. The coated transfer sheet of claim 18, wherein said monomer primary resins comprise monofunctional monomers, difunctional monomers, trifunctional monomers, higher functionality monomers, water dispersible monomers, adhesion promoting monomers, pigment dispersing monomers and scorch retarding monomers.

20. The coated transfer sheet of claim 19, wherein

said monofunctional monomers are selected from the group consisting of acrylates, methacrylates, and ethylacrylates;

said difunctional monomers are selected from the group consisting of diacrylates and dimethacrylates;

said trifunctional monomers are selected from the group consisting of triacrylates and trimethacrylates;

said higher functionality monomers are selected from the group consisting of tetra- and pentaacrylates and

pentaacrylate esters, aliphatic and aromatic acrylates; aromatic urethane acrylates and metallic acrylates;

said water dispersible monomers are selected from the group consisting of 2(2-ethoxyethoxy) ethylacrylate and polyethylene glycol diacrylates, and

said adhesion promoting monomers are selected from the group consisting of acrylate esters and methacrylate esters.

21. The coated transfer sheet of claim 20, wherein

said diacrylates and dimethacrylates are selected from the group consisting of tripropylene glycol diacrylate, bisphenol A diacrylates and ethoxylated bisphenol A dimethacrylates, and

said triacrylates and trimethacrylates are selected from the group consisting of trimethylolpropane ethoxy triacrylate and trimethyl propane triacrylates.

22. The coated transfer sheet of claim 18, wherein said oligomer polymer resins are selected from the group consisting of aliphatic urethane acrylates; aliphatic urethane diacrylates; aliphatic urethane triacrylates; hexafunctional aliphatic urethane acrylates; hexafunctional aromatic urethane acrylates; trifunctional aromatic urethane acrylates, aromatic urethane acrylates; urethane methacrylates; epoxy acrylates; epoxy methacrylates; polybutadiene dimethylacrylates; diacrylates of bisphenol-A epoxy resins; modified bisphenol-A epoxy acrylate resins; novolac epoxy acrylates; modified epoxy acrylates; partially acrylated bisphenol-A epoxy resins; bisphenol-A epoxy diacrylates; polyester resins; cycloaliphatic epoxide resins; modified cycloaliphatic epoxides; aliphatic polyols;

partially acrylated bisphenol-A epoxy resins; and cycloaliphatic diepoxides.

23. The coated transfer sheet of claim 22, wherein

said polyester resins are selected from the group consisting of chlorinated polyester resins, modified polyester resins, polyester methacrylates, acrylated polyesters, modified polyester acrylates, modified polyester hexaacrylates, polyester tetracrylates, and hexafunctional polyester acrylates;

said cycloaliphatic epoxide resins is 3,4-epoxycyclohexyl-methyl-3,4,-epoxycyclohexane carboxylate; and

said modified cycloaliphatic epoxides are selected from the group consisting of acrylate modified cycloaliphatic epoxides containing both acrylate and epoxy functionalities.

24. The coated transfer sheet of claim 1, wherein said barrier layer comprises an acrylic polymer.

25. The coated transfer sheet of claim 1, wherein said barrier layer comprises a styrene-butadiene resin.

26. The coated transfer sheet of claim 1, wherein said barrier layer comprises a polymer selected from the group consisting of: poly(dienes), poly(methacrylics), poly(acrylamides), poly(methacrylic acids), poly(vinyl ethers), poly(vinyl halides), poly(vinyl esters) and hydrolyzed or partially hydrolyzed versions thereof, poly(styrenes), poly(oxides), poly(carbonates), poly(esters), poly(anhydrides), poly(urethanes), poly(siloxanes), poly(sulfones), poly(sulfonamides),

poly(amides) poly(imines), poly(benzimidazoles), and carbohydrates, and copolymers derived from any of the foregoing.

27. The coated transfer sheet of claim 1, wherein said barrier layer comprises a cycloaliphatic epoxide, optional cycloaliphatic epoxide resin, epoxy novolac resin, optional alcohol, activated epoxy, aryl ketone, optional polyacrylate, and optional polysiloxane.

28. The coated transfer sheet of claim 1, wherein said barrier layer is present in a dry coat amount of from 1 to 20 g/m^2.

29. The coated transfer sheet of claim 1, wherein said release layer is present in an amount of from 12 to 50 g/m^2.

30. The coated transfer sheet of claim 8, wherein said image receiving layer is present in an amount of from 1 to 20 g/m^2.

31. The coated transfer sheet of claim 1, which further comprises an antistatic layer coated on said second surface of the substrate, wherein said antistatic layer comprises a quaternary ammonium salt solution.

32. The coated transfer sheet of claim 1, which further comprises an antistatic layer coated on said second surface of the substrate, wherein said antistatic layer comprises a polyether solution.

33. A coated transfer sheet of claim 1, wherein said release layer comprises:

a film-forming binder which melts in the range of from about 65°C to about 180°C;

a wax dispersion; and

a retention aid.

34. The coated transfer sheet of claim 33, wherein said film-forming binder is selected from the group consisting of ethylene-acrylic acid copolymers, polyolefins, and waxes.

35. The coated transfer sheet of claim 33, wherein said wax dispersion is selected from the group consisting of natural and synthetic waxes.

36. The coated transfer sheet of claim 33, wherein said retention aid is selected from the group consisting of polyvinyl alcohols, polymer latexes and silicates.

37. The coated transfer sheet of claim 33, which further comprises at least one image receiving layer overlaying said at least one release layer, wherein said image receiving layer comprises ethylene-acrylic acid copolymers.

38. The coated transfer sheet of claim 33, wherein said thermosetting polymer is selected from the group consisting of thermosetting acrylic polymers and blends; thermosetting polyurethanes, block polyurethanes and aromatic-functional urethanes; thermosetting polyester

polymers and co-polymer systems; aromatic-functional vinyl polymers and polymer blends; and thermosetting epoxy resins.

39. The coated transfer sheet of claim 38, wherein said thermosetting acrylic polymers and blends are hydroxyl-functional acrylic polymers, carboxy-functional acrylic polymers and vinyl acrylic polymer blends.

40. The coated transfer sheet of claim 38, wherein said thermosetting polyester polymers and co-polymer systems are neopentyl glycol isophthalic polyester resins, dibromoneopentyl glycol polyester resins and vinyl ester resins.

41. The coated transfer sheet of claim 38, wherein said thermosetting epoxy resins are epoxy novolac resins.

42. The coated transfer sheet of claim 33, wherein said ultraviolet curable polymers are selected from the group consisting of cationic mechanism setting UV curable polymers, free radical mechanism setting UV curable polymers and a hybrid resin system comprising both cationic mechanism and free radical mechanism setting UV curable polymers.

43. The coated transfer sheet of claim 33, wherein said thermosetting or ultraviolet curable polymer is combined with at least one vinyl acetate polymer.

44. The coated transfer sheet of claim 33, wherein said ultraviolet curable polymer comprises monomer and oligomer primary resins.

45. The coated transfer sheet of claim 44, wherein said monomer primary resins comprise monofunctional monomers, difunctional monomers, trifunctional monomers, higher functionality monomers, water dispersible monomers, adhesion promoting monomers, pigment dispersing monomers and scorch retarding monomers.

46. The coated transfer sheet of claim 45, wherein

said monofunctional monomers are selected from the group consisting of acrylates, methacrylates, and ethylacrylates;

said difunctional monomers are selected from the group consisting of diacrylates and dimethacrylates;

said trifunctional monomers are selected from the group consisting of triacrylates and trimethacrylates;

said higher functionality monomers are selected from the group consisting of tetra- and pentaacrylates and pentaacrylate esters, aliphatic and aromatic acrylates; aromatic urethane acrylates and metallic acrylates;

said water dispersible monomers are selected from the group consisting of 2(2-ethoxyethoxy) ethylacrylate and polyethylene glycol diacrylates, and

said adhesion promoting monomers are selected from the group consisting of acrylate esters and methacrylate esters.

47. The coated transfer sheet of claim 46, wherein

said diacrylates and dimethacrylates are selected from the group consisting of tripropylene glycol diacrylate, bisphenol A diacrylates and ethoxylated bisphenol A dimethacrylates, and

said triacrylates and trimethacrylates are selected from the group consisting of trimethylolpropane ethoxy triacrylate and trimethyl propane triacrylates.

48. The coated transfer sheet of claim 44, wherein said oligomer polymer resins are selected from the group consisting of aliphatic urethane acrylates; aliphatic urethane diacrylates; aliphatic urethane triacrylates; hexafunctional aliphatic urethane acrylates; hexafunctional aromatic urethane acrylates; trifunctional aromatic urethane acrylates, aromatic urethane acrylates; urethane methacrylates; epoxy acrylates; epoxy methacrylates; polybutadiene dimethylacrylates; diacrylates of bisphenol-A epoxy resins; modified bisphenol-A epoxy acrylate resins; novolac epoxy acrylates; modified epoxy acrylates; partially acrylated bisphenol-A epoxy resins; bisphenol-A epoxy diacrylates; polyester resins; cycloaliphatic epoxide resins; modified cycloaliphatic epoxides; aliphatic polyols; partially acrylated bisphenol-A epoxy resins; and cycloaliphatic diepoxides.

49. The coated transfer sheet of claim 48, wherein

said polyester resins are selected from the group consisting of chlorinated polyester resins, modified polyester resins, polyester methacrylates, acrylated polyesters, modified polyester acrylates, modified polyester hexaacrylates, polyester tetracrylates, and hexafunctional polyester acrylates;

said cycloaliphatic epoxide resins is 3,4-epoxycyclohexyl-methyl-3,4,-epoxycyclohexane carboxylate; and

said modified cycloaliphatic epoxides are selected from the group consisting of acrylate modified cycloaliphatic epoxides containing both acrylate and epoxy functionalities.

50. The coated transfer sheet of claim 33, wherein said barrier layer comprises an acrylic polymer.

51. The coated transfer sheet of claim 33, wherein said barrier layer comprises a styrene-butadiene resin.

52. The coated transfer sheet of claim 33, wherein said barrier layer comprises a polymer selected from the group consisting of: poly(dienes), poly(methacrylics), poly(acrylamides), poly(methacrylic acids), poly(vinyl ethers), poly(vinyl halides), poly(vinyl esters) and hydrolyzed or partially hydrolyzed versions thereof, poly(styrenes), poly(oxides), poly(carbonates), poly(esters), poly(anhydrides), poly(urethanes), poly(siloxanes), poly(sulfones), poly(sulfonamides), poly(amides) poly(imines), poly(benzimidazoles), and carbohydrates, and copolymers derived from any of the foregoing.

53. The coated transfer sheet of claim 33, wherein said barrier layer comprises a cycloaliphatic epoxide, optional cycloaliphatic epoxide resin, epoxy novolac resin, optional alcohol, activated epoxy, aryl ketone, optional polyacrylate, and optional polysiloxane.

54. The coated transfer sheet of claim 33, wherein said barrier layer is present in a dry coat amount of from 1

to 20 g/m^2; and said release layer is present in an amount of from 12 to 50 g/m^2.

55. The coated transfer sheet of claim 33, which further comprises an antistatic layer coated on said second surface of the substrate, wherein said antistatic layer comprises a quaternary ammonium salt solution.

56. The coated transfer sheet of claim 33, which further comprises an antistatic layer coated on said second surface of the substrate, wherein said antistatic layer comprises a polyether solution.

57. A method of applying an image to a receptor element which comprises the steps of:

(i) imaging the coated transfer sheet of claim 1,

(ii) positioning the front surface of the transfer sheet against said receptor element,

(iii) applying energy to the rear surface of the transfer sheet to transfer said image and release layer to said receptor element,

(iv) optionally allowing the substrate to cool, and

(v) removing the substrate and barrier layer from the receptor element.

58. The method of claim 57, wherein said imaging is provided by an electrostatic printer or copier.

59. The method of claim 57, wherein said imaging is provided by offset or screen printing.

60. The method of claim 57, wherein said imaging is provided by craft-type marking.

61. The method of claim 60, wherein said craft-type marking is selected from the group consisting of markers, crayons, paints or pens.

62. A coated transfer sheet comprising:

a substrate having a first and second surface;

at least one barrier layer overlaying said first surface, wherein said barrier layer comprises a polymer selected from the group consisting of a thermosetting polymer, an ultraviolet curable polymer, and combinations thereof; and

at least one release layer overlaying said at least one barrier layer, said release layer comprising:

a thermoplastic polymer which melts in a range of from about 65°C to about 180°C and has a solubility parameter less than about 19 $(Mpa)^{1/2}$; and optionally

at least one image receiving layer overlaying said at least one release layer, said image receiving layer comprising an ethylene acrylic acid co-polymer dispersion.

63. The coated transfer sheet of claim 1, further comprising

at least one silver halide light sensitive emulsion layer containing light sensitive silver halide grains.

64. The coated transfer sheet of claim 1, wherein said release layer has light sensitive silver halide grains dispersed therein.

65. The coated transfer sheet of claim 1, further comprising at least one layer of photosensitive microcapsules or at least one layer of photosensitive microcapsules and developer in the same layer or at least one layer of photosensitive microcapsules and developer in separate layers coated on the transfer sheet.

66. The coated transfer sheet of claim 1, further comprising photosensitive microcapsules or photosensitive microcapsules and developer dispersed in the release layer.

67. The coated transfer sheet of claim 1, further comprising

at least one thermal recording layer coated on the surface of the transfer sheet, wherein said at least one thermal recording layer contains heat-responsive microcapsules capable of creating an image.

68. The coated transfer sheet of claim 1, wherein said release layer further comprises heat-responsive microcapsules capable of creating an image.

69. The coated transfer sheet of claim 1, wherein said image layer further comprises an ethylene vinyl acetate copolymer powder.

70. The coated transfer sheet of claim 1, wherein said image layer further comprises an oxidized polyethylene homopolymer.

71. A coated sheet comprising:

a substrate having a first and second surface;

at least one barrier layer comprising a polymer selected from the group consisting of a thermosetting polymer, an ultraviolet curable polymer, and combinations thereof.